FORM MR-1
(Revised November 1984)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
Telephone: (801) 538-5340

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS and MINING AND RECLAMATION PLAN

Based on Provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, General Rules and Regulations and Rules of Practice and Procedures, By Order of the Board of Oil, Gas and Mining.

Mine Name: Pleasantview Pit Mine Plan Date: _____

File No.: ACT/057/003 Date Received: JULY 10, 1987

Operator: Interpace Industries, Inc. DOGM Lead Reviewer: F. FILAS

Mineral(s) to be Mined: Shale

Please attach other sheets as needed and include cross-reference page numbers when used.

1. Name of Applicant or Company: Interpace Industries, Inc.
   Corporation (X) Partnership ( ) Individual ( )

2. Address: Permanent: Interpace Industries, Inc.
   Highway 27 Mica, WA 99023
   Temporary: _____

3. Company Representative: Name: George A. Beamer
   Title: Product Development Engineer
   Address: Highway 27 MICA, WA 99023 Phone: 509 924-2120

4. Location of Operation: County(ies) Box Elder/Weber
   Township(s): 7N Range(s): 2W Section(s): 13
   Township(s): _____ Range(s): _____ Section(s): _____
   Township(s): _____ Range(s): _____ Section(s): _____

5. Owner(s) of record of the surface area within the land to be affected:

Name:	G. Raymond Jones	Address:	3243 North 400 West
Name:		Address:	Ogden, UT 84404
Name:	Harry S. Cragun	Address:	C/O Louis Cragun
Name:		Address:	P.O. Box 7046 Bunkerville, NV 89007

6. Owner(s) of record of the minerals to be mined:

Name: Same as item 5 Address: _____
Name: _____ Address: _____
Name: _____ Address: _____
Name: _____ Address: _____

7. Owner(s) of record of all other minerals, including oil and gas, within any part of the land to be affected:

Name: Same as item 5 Address: _____
Name: _____ Address: _____
Name: _____ Address: _____

8. Have the above owners been notified in writing? (X) Yes, ( ) No. If no, why not? _____

9. Have you or any other person, partnership or corporation associated with you received an approval of a Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein? ( ) Yes, (X) No. If yes, list all approval numbers now under surety:

_____ _____ _____
_____ _____ _____
_____ _____ _____

10. Source of Operator's legal right to enter and conduct operations on the land to be covered by this Notice:

mineral lease agreements with owners of record dated 11/1/74 and 1/1/77 as renewed

11. Give the names and mailing addresses of every principal Executive, Office, Partner (or person performing a similar function) of Applicant:

	Name	Title	Address
A.	see attachment		
B.			
C.			
D.			

INTERPACE
INDUSTRIES, INC.

MICA, WASHINGTON 99023 / 509-924-2120

Interpace Industries, Incorporated
12502 - 132nd Avenue N.E.
Kirkland, Washington 98034

Federal I.D. No. 91-1264404

Mailing Address: Box 7201

Woodinville, WA 98072

Corporate Officers	Title	Address
Jon J. Rhine	President	3663 S. Oceanside Greenbank, WA 98253
Richard A. Conroy	Executive Vice President	12321 101st Court N.E. Kirkland, WA 98033
Robert E. Cole	Vice President	N. 11021 Morrison Road Spokane, WA 99207
Ronald P. McFadden	Vice President	8450 S.E. 47th Place Mercer Island, WA 98040

Harrisville, Utah Plant
Pat Patterson - Plant Manager
736 West Harrisville Road
Ogden, UT 84404
(801) 782-7933

Mining Operations
George A. Beamer - Product Development Engineer
Interpace - Mica Plant
Highway 27
Mica, WA 99023
(509) 924-2120

12. Has the Applicant, any subsidiary or affiliate or any person, partnership, association, trust or corporation controlled by or under common control with the Applicant, or any person required to be identified by Item 11 ever had an approval of a Notice of Intention to Mine or Explore withdrawn or has surety relating thereto ever been forfeited? ( ) Yes, (X) No.

If yes, please explain: _____

_____

_____

_____

_____

_____

Please note: Section 40-8-13 of the Act provides that information relating to the location, size or nature of the deposit, and marked confidential by the Operator, shall be protected as confidential information by the Board and the Division and not be a matter of public record in the absence of a written release from the Operator, or until the mining operation has been terminated as provided in Subsection (2) of Section 40-8-21 of the Act. This material should be so marked and included on separate cross-referenced sheets.

13. All maps and plans prepared for submission shall be of adequate scale and detail to show topographic features and clearly indicate the following details:

A. Location and delineation of the extent of the land previously affected, as well as the proposed surface disturbance.
B. Existing active or inactive, underground or surface mined areas.
C. Boundaries of surface properties, including ownership.
D. Names and locations of:
   (1) Lakes, rivers, streams, creeks and springs.
   (2) Roads, highways and buildings.
   (3) Active or abandoned facilities.
   (4) Transmission lines within 500 feet of the exterior limits of land affected.
   (5) Gas and/or oil pipelines.
   (6) Site elevation.
E. Drainage patterns of land affected:
   (1) Overburden or topsoil removal and storage areas.
   (2) Areas susceptible to erosion.
   (3) Natural waterways.
   (4) Constructed drainages, diversions, berms and sediment ponds (design calculations shall be included).
   (5) Receiving waters (State Health classification).
   (6) Directional flow of all surface waters (indicated by arrows).
F. Known drill holes:
   (1) Location.
   (2) Status.

(3) Depths and thicknesses of:*
   a. Water bearing strata.
   b. Mineral deposits.
   c. Toxic or potentially toxic materials.
   d. Surficial or plant supporting material (topsoil and subsoil).

G. Locations of disposal and stockpile areas:
   (1) Topsoil and subsoil storage areas.
   (2) Overburden storage area.
   (3) Waste, tailings, rejected materials.
   (4) Raw ore stockpile(s).
   (5) Tailings-ponds and other sediment control structures.
   (6) Discharge points, water effluents (see #15[D]).

All maps should have a color code or other suitable legend used in preparation to clearly indicate surface features of the land affected. A general reference map completed on a 7.5 (1:24,000) USGS quadrangle sheet is recommended with additional large scale maps included for practical delineation of individual facilites, (e.g., 1:200, 1:500).

14. Acreage to be disturbed:

A. Minesite (operating, storage, disposal areas, etc.): 12.0
B. Access/haul roads/conveyors: 0.1
C. Associated on-site processing facilities: none

15. Describe mining method to be employed, including:

A. Mining sequence:
   (1) Map delineating the yearly sequential disturbance (if surface mine) and/or surficial disturbance.
   (2) Narrative (including on-site processing or mineral treatment):

see attachment A

Attach supplemental sheets and/or diagrams as necessary with cross reference to page number here: _____.

*Stratigraphic or lithologic logs if correlated to footage depths may be presented when labeled (maps or logs should be labeled confidential, if so desired).

B. If sedimentary deposit seam(s):
(1) Thickness(es): not applicable
(2) Dip:
(3) Outcrop:

C. Will any underground workings or aquifers be encountered? ( ) Yes, (X) No. If yes, describe potential impacts and protection measures to be taken:

D. Describe any active discharge or proposed discharge of water from mine or site area. Include water quality data and lab test reports. If attached sheets or reports are included, cross reference to page number here: _____.

not applicable

16. Have all necessary water rights been appropriated? ( ) Yes, ( ) No. How will water be obtained? Please explain: not applicable

17. Proposed or estimated duration of mining operation: 25 years + Will the permit term be for a lesser amount of time, suoject to review? (e.g., for surety estimate reasons). ( ) Yes, (X) No. If yes, how long?

18. Describe the construction and maintenance of access roads including:
A. Procedures (drainage and erosion control methods).
B. Cross section(s).
C. Profile(s) of proposed road grade(s).

Access road is to be outside permit area/reclamation plan except last 100-200 feet. Access road serves several other users and cannot be reclaimed.

All access is in existence - no construction planned
Drainage/erosional problems are insignificant

Attach supplemental diagrams and cross reference to page number here: _____.

19. Prior land use(s): rangeland and wildlife
Current land use(s): same
Possible projected or prospective future land use(s): same

20. Describe methods of tree and brush removal: see attachment A

Provide estimate of, and method of obtaining existing vegetation cover (%): Estimated previously and approved by Department Site inspection to be 50%.

What types of dominant vegetation are present? sagebrush/grasses

Photographs and/or maps may be attached to these forms, cross reference to page number here: _____.

21. Soils (surficial plant supportive material) and overburden: Except where slope or rocky terrain make it impossible, all surficial materials suitable as a growth medium shall be removed, segregated and stockpiled according to its ability to support vegetation (as determined by soil analysis and/or practial revegetation experience) prior to any major excavation. (Suggested minimum requirements are the top six inches, or the "A" horizon, whichever is larger.)

A. What is the pH range of the soil before mining? 7.55
Name of person or agency and method of determining pH: ABC Labs E. Union Avenue Spokane, WA 99206
Attach lab report if available. Cross reference page number here: Attachment C

B. Average depth of topsoil and subsoil to be stripped and stockpiled: 1½ to 3 inches. Calculated volume of soil to be stockpiled: 3000 yards.

C. Describe the method for removing and stockpiling topsoil and subsoil, including measures to protect topsoil from wind and water erosion, compaction and pollutants: see attachment A

D. Describe the method for removing and stockpiling overburden. Describe and discuss the acidity or alkalinity (pH) or other characteristics which would affect revegetation: see attachment A

E. Rock subjected to processing such as waste rock, tailings, etc., and which is to be disposed of on- or off-site must be subjected to a toxicity analysis. The method of determination, results and suitable disposal methods must be explained in detail, including means for containment and long range stability*:

associated waste material is known to be non-toxic

22. Describe the methods used to minimize public safety and welfare hazards during and after mining operations including:

A. Shaft, tunnel and drill hole closure. N/A

B. Disposal of trash, scrap metal and wood and extraneous debris, waste oil and solvents, unusable buildings and foundations, sewage and other materials incident to mining. N/A

C. Posting of appropriate warning signs and/or fences or berms to act as barriers (e.g., above highwalls) in locations where public access is available.

Barrier berms will be installed during the next operation of this pit

*"Toxic" means any chemical or biological or adverse characteristic of the material involved which could reasonably be expected to negatively affect ecological or hydrological systems or could be hazardous to the public safety and welfare.

23. Grading and soil redistribution. pre-mining contours not available

A. Attach pre- and postmining contour cross sections, typical of regrading designs. Cross reference to page number here: _____.

B. Describe the method(s) of overburden replacement and stabilization and highwall elimination, including: (a) slope factors; (b) lift heights; (c) compaction; (d) terracing, etc., (e) also include testing procedures:

overburden replacement by dozer where practical by loader and trucks elsewhere

highwall elimination/reshaping by dozer

C. What method of spreading topsoil and subsoil or upper horizon material on the regraded area will be employed?

trucks and loader to haul; dozer to spread; tractor with disc for final grades

1. Indicate the approximate depth of soil cover after final surfacing 2-3 inches.
2. What tests will be performed to adequately evaluate the potential of the soil to successfully support intended revegetation?
3. What soil amendments or fertilizers will be needed as an aid to revegetation?
   Type: Diammonium phosphate 18-46-0 Rate: 200 lbs/acre
   Type: _____ Rate: _____
   Type: _____ Rate: _____
4. What additional surface preparations will be used? Describe (a) drainage, erosion and sediment control measures; (b) maximum slope characteristics; and (c) highwall reclamation.

no drainage, erosion, sediment problems anticipated
maximum slopes 2:1

5. Describe methods which may be particularly applicable to waste disposal areas determined to be potential problem areas.

N/A

D. Describe plans for either leaving or reclaiming the roads and pads associated with the operation.

pit roads to be recovered with topsoil disced and seeded. Access road to be left as is for other users. Pads to be recovered, disced and seeded.

24. Impoundments: All evaporation, tailings and sediment ponds; spoil piles, fills, pads and regraded areas shall be self-draining and nonimpounding when abandoned unless previously approved as an impounding facility by a lawful state or federal agency. In view of this, please describe the reclamation of all related areas in the operation and include pertinent items enumerated in C, 1-5 above.

Not applicable.

25. Revegetation plans:

A. What organization, agency or person will specifically be performing the revegetation? Interpace Industries, Inc.

B. Will the affected area be subject to livestock or wildlife grazing? (X) Yes, ( ) No. Will vegetation protection be needed to allow for a determination of the successful revegetation criteria outlined in the Mined Land Reclamation Act, Rule M-10(12)? ( ) Yes, (X) No. If yes, what measures will the operator take?

C. Will irrigation be used? ( ) Yes, (X) No. Type: _____. For how long? _____.

D. Test plots initiated during the early stages of mine development provide good bases from which a successful revegetation program can be adapted for later implementation. Will test plots be employed? ( ) Yes, (x) No. If yes, describe on an additional sheet(s) and attach. Cross reference page number here and show location on facilities map: _____.

E. Please attach a revegetation plan and schedule including:
   1. Species to be used. Per attachment B
   2. Rate of seed application/acre.
   3. Season to be planted.
   4. Seedbed preparation techniques.
   5. Planting location, slope face direction, variability, method of application, covering, etc.
   6. Mulch and fertilizer application, if used.

F. Describe any other maintenance procedures which may be used, if needed, to guarantee successful revegetation:

None planned

26. Please provide a reclamation schedule including:

A. Estimated time for construciton.
B. Estimated time for interim reclamation.
C. Estimated duration of the mining operation. 25 years +
D. A time table for the accomplishment of each major step in the reclamation plans. Attach the schedule and cross reference to the page number here: Attachment A .Highwall reduction planned for next operating season.

27. A surety guarantee must be provided for the mining operation (see Rule M-5 Mined Land Reclamation Act). In calculating this amount, the Division will consider the following major steps based on the information provided in this report:

A. Clean up and removal of structures.
B. Backfilling, grading and contouring.
C. Topsoil and subsoil redistribution and stabilization.
D. Revegetation (i.e., preparation, seeding, mulching, irrigation).
E. Labor.
F. Safety and fencing.
G. Monitoring, and reseeding if necessary.

To assist the Division, the operator may attach a list of costs and factors which would satisfy these areas. Substantiation of these factors, i.e., unit costs and how they are derived, should accompany the list. Cross reference the page number here: Attachment D .

28. A request for a variance from specific commitments to Rule M-10 (Reclamation Standards) of the Mined Land Reclamation Act may be submitted with adequate written justification. If after presentation of information adequately detailing the situation, a determination is made that finds a Division portion of the rule inapplicable, a variance may be granted by the Division.

I hereoy commit the applicant to comply with Rule M-10, "Reclamation Standards" in its entirety, as adopted by the Board of Oil, Gas and Mining on March 22, 1978.

The applicant will achieve the reclamation standards for the following categories as outlined in Rule M-10 on all areas of land affected by this mine, unless a variance is granted in writing by the Division.

Rule	Category of Commitment	Variance Requested?
M-10(1)	Land Use	
M-10(2)	Public Safety and Welfare	
M-10(3)	Impoundments	
M-10(4)	Slopes	
M-10(5)	Highwalls	
M-10(6)	Toxic Materials	
M-10(7)	Roads and Pads	
M-10(8)	Drainages	
M-10(9)	Structures and Equipment	
M-10(10)	Shafts and Portals	
M-10(11)	Sediment Control	
M-10(12)	Revegetation	
M-10(13)	Dams	
M-10(14)	Soils	

I believe a variance is justified on a site-specific basis for the previous subsections of Rule M-10 as indicated. A narrative statement explaining these concerns is attached.

STATE OF Washington

COUNTY OF Spokane

I, George A. Beamer, having been duly sworn depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.

Signed: George A Beamer

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 10th day of July, 19 87.

Notary Public: Nancy Jewell

My Commission Expires: 10-10-88

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.

Only information relating to the location, size or nature of the deposit may be protected as confidential.

Confidential Information Enclosed: ( ) Yes (X) No

MINE MAPS

1. Maps must be clear and legible contour maps or recent aerial photos. The scale should be 1 inch = 500 feet to adequately show topographic features.

2. Map sheets should be of a reasonable size, not to exceed 48 inches on a side.

3. Maps must have a title block with:

   A. Map title.
   B. Name and address of permittee.
   C. Permit and amendment numbers.
   D. Annual report period.
   E. Scale, north arrow, contour interval, date of photography, etc.

4. All maps must show:

   A. Legal subdivisions.
   B. Permit area boundary clearly shown and labelled.
   C. Amendment areas clearly shown and labelled.
   D. Contour features.

5. The following features should all be clearly identified:

   A. Topsoil stockpiles (numbered and with volumes).
   B. Settling ponds and sediment control structures.
   C. Haul roads.
   D. Pits identified by location, name, number, etc.
   E. Ramps (numbered).
   F. Out-of-pit spoil dumps.
   G. All waste disposal sites including, but not limited to:
      1. Landfill sites.
      2. Carbonaceous waste dumps.
   H. Diversion ditches.
   I. Monitoring sites.

ATTACHMENT A - Mining and Reclamation Plan

1. Mining Methods

This mine is designed to be a conventional open pit mine where development, mining, and backfilling will be done concurrently, thus minimizing the area of disturbance at any point in time during the extractive cycle. The mine area has a rolling topography which will enhance our ability to reshape the excavations to blend with the adjacent topography. A mine layout showing existing workings, storage areas, and projected areas of minable shale is shown on Sheet 3 of Section V., Maps and Drawings.

It has been determined by surface drilling, trenching, and other discovery means, the deposit is generally circular in shape covering an area of about 30 acres. Mining depth will be limited by moisture content of the shales, or, by intercepting locally underlying gravels.

This mine will be worked in a series of small pits. It is anticipated each pit would be about 200' x 300' in size, and excavated about 40 feet deep. A cut/fill system will be employed. Basically, our proposal is this. In developing a new pit, the gound cover, consisting chiefly of sagebrush, will be scraped from the surface area to be developed, and disposed in the pit being backfilled. Top soils and subsoils will be selectively removed and stored in seperate soil stockpiles for future restoration use. The subeconomic materials and unuseable shales will be removed and used as backfill. Once the useable shales are exposed, they can be ripped with a dozer, and be transported to the stockpile storage area. If the schist and hard shale requires crushing prior to stockpiling, the material would be brought from the pit, run through the crusher, and stockpiled using conveyor stackers. As the pits are developed downward, the walls are offset 10 feet

on 20 foot vertical centers. This is in conformance with General Safety Orders issued by the Industrial Commission of Utah, and Open Pit Mine Standards issued by the Mining Enforcement and Safety Administration (MESA). Operating experience has shown this method to be a safe and effecient method.

Typical of the conventional mining equipment used in this operation is the D-8 (or similiar) dozer used to excavate, rip and prepare materials; a 5 cubic yard front end loader; and 10 wheel, 12 - 15 cubic yard dump trucks, plus support equipment as may be required including a roadway sprinkling truck.

A single lane, moderately improved gravel road starting at Highway 89, provides access to the mine. This road is also a service road for the local land owner, utility companies, and other authorized personnel. There will be no other roadways constructed to service this mine. Since this road serves multiple uses, the long range plan is to maintain the roadway intact after mine restoration is complete.

2. Grading and Regrading

During the mining cycle, all surficial top soil will be removed, and stockpiled. Subsoil will be carefully removed and stockpiled seperately. The economic unit will be extracted and stockpiled for off-site transportation by truck. A total of approximately 12 acres surface area will be involved in mine production.

Following extractive operations, all mounds and sharp excarpments will be reduced; clays, shales, and ancillary storage facilities will be regraded; the area cleared of debris; and a mantle of 1¼" - 3" of soil

redistributed over restored areas. The seed mixture listed in Attachment B will be spread over the restored areas to promote revegetation and stability.

Drainage or drainage control is not a problem in this mine. Only on very rare occasions are there even small residual ponds of water, and then of short duration.

Restoration Schedule

Reclamation in this project will continue as operational conditions permit during each mining season. It should be pointed out, however, the economics of the facebrick industry are unique and competitive, and therefore we must manufacture only those product lines which the public or customer will accept. Our raw material production is therefore dictated by our manufacturing requirements. Clay production from this source may be accelerated or decelerated as required by production needs. This is not to say reclamation on this project will be done at our leisure, but rather, it will be accomplished during our seasonal operations as production from this source is required. More specifically:

Reclamation and restoration will be completed when mined areas are available for restoration.

Any remaining reclamation and restoration will be completed within 24 months after extractive activity has ceased, and prior to mine abandonment.

We feel this plan affords the opportunity for both Interpace and the responsible government agencies to plan, implement, and commit to a broad overall concept within the framework of sound reclamation practice rather than an unrealistic time schedule.

Attachment B

Pleasantview Pit

Seed Mixture

	lbs./acre
Intermediate wheatgrass	5
Bluebunch wheatgrass	5
Bulbous bluegrass	2
Ladak alfalfa (or other dry land type)	3
Big sagebrush	2
Bitterbrush	2
Rabbitbrush	1
Total	20

Prepare seedbed by ripping or discing.

Plant seed with drill or hand broadcast, then harrow or rake in seed ¼' - ½" deep - preferably in the fall.

Put on 200 lbs./acre of fertilizer at time of seeding. (Diammonium phosphate 18-46-0)

Attachment C

ABC Laboratories

Spokane, Wash. 99202

Client's No. 6259

Lab. No. 1912-76

Date December 22, 1976

REPORT

Report to: Interpace Corporation
Mica,
Washington, 99023

Description: Perform pH Value on three (3) submitted Soil samples.

Samples			pH Value
1.	Pleasant View	#1844	7.55
2.	Plantsite	#3641	7.65
3.	Clinton	#1842	7.49

Note: pH determined by Glass Electrode Method on Paste from Soil-Distilled Water Mixture.

Respectfully submitted,

ABC LABORATORIES, INC.

W. E. Burkhardt,
Manager